

# Western US Invasive Plant EDRR Weed ID Guide



# Card key

Photo credits

Plant category

Page number

Common and scientific names

**Hydrilla**  
*Hydrilla verticillata*

1. Michael Frank, Galileo Group Inc.
2. Univ. of FL, IFAS Center
3. Allison Fox
4. Steve Hart @ NRCS PLANTS
5. C. Evans, River to River CWMA
6. G. Buckingham, USDA-ARS
7. USDA-NRCS PLANTS

Aquatics

A-3

Biocontrol agent information, when applicable

Western states where plant is listed as a noxious weed

**Hydrilla**  
*Hydrilla verticillata*

CA  
NV  
OR  
WA US

**Description**  
Perennial aquatic plant. Rooted to the bottom with long stems that reach water's surface. Leaves are 1/16 to 1/8 in wide, 1/4 to 3/4 in long and occur in whorls of five. Small, axillary leaf scales are found next to the stem and inserted at the base of the leaf, distinguishing hydrilla from other family members. The nut-like tubercles are a key identifying feature.

**Impacts**  
Hydrilla is the most serious threat to aquatic ecosystems in temperate climate zones. Dense stands of hydrilla provide poor habitat for fish and other wildlife and create stagnant water (which is good breeding grounds for mosquitoes). Hydrilla interferes with recreational activities and will clog irrigation ditches and intake pipes.

**Biological controls**  
Tuber and stem weevils (*Bagous affinis* and *B. hydrillae*), and two leaf-mining flies (*Hydrellia balcanasi* and *H. pakistanae*) are approved for release on hydrilla where it is established. *H. pakistanae* has had the greatest impact on US populations.

**Distribution in the US**  
PLEASE CALL 1-866-INVASER IF YOU FIND THIS SPECIES IN OREGON.

*H. pakistanae*

A-4

Oregon alert

Oregon or US distribution map

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# Introduction to EDRR

Early Detection and Rapid Response (EDRR) is an approach to invasive species management that focuses on surveying and monitoring at-risk areas to find infestations at their earliest stages of invasion. Along with prevention, this method is the most successful, cost effective, and least environmentally damaging means of control.

If new invasive noxious weeds are allowed to go unchecked, economic losses will exceed the present control costs of eradication or containment by several orders of magnitude. After initial introduction of a new invasive plant, there is a short period of opportunity for eradication or containment. Once permanently established, a new invader becomes a long-term management problem.



## EDRR survey methods

To effectively survey for new infestations of noxious weeds it is important to approach the task in a systematic, organized manner. For example, small areas can be divided into grids and walked, road systems can be driven, or large areas can be flown over by plane or helicopter when plants are at a noticeable growth stage (e.g., when flowers or foliage are a distinctive color). Computer modeling may also be utilized to predict where infestations may occur.

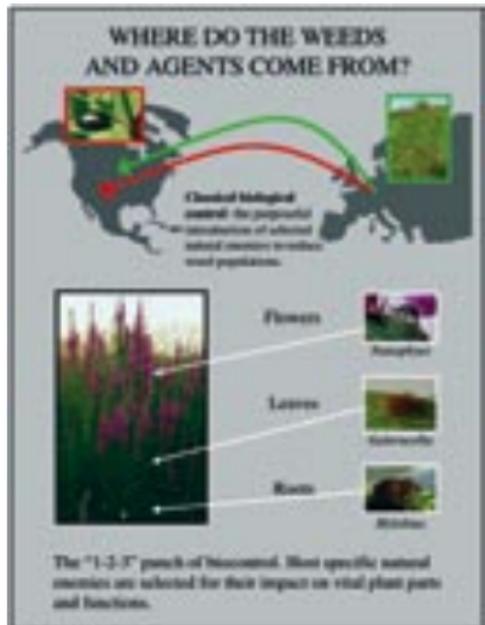
Having the appropriate tools is also important. Carry a weed identification guide that emphasizes characteristics that can be observed in the field. Stock your pack with plant collecting supplies, a detailed map of the area, a notebook or data collecting device, a camera, and a GPS unit.

Keep detailed notes of your findings. An accurate GPS reading is the most valuable piece of information for mapping and returning to the site. In the absence of a GPS unit or signal, mark the approximate location and dimensions on the map; also record the township, range, section and quarter-section and directions to the site in your notes. Provide as much associated detail as possible such as number of plants or acres, plant stage, associated plant community, and habitat type. Providing these details ensures that the infestation can be responded to quickly and eradicated or contained.

# Introduction to biological control

As part of an Integrated Pest Management approach to managing noxious weeds, biological control can be a valuable tool for controlling large infestations on wildlands. Biocontrol agents destroy plant tissues and cause stress to the weeds, making them less competitive against desirable flora.

Many of our worst weeds originated from Eurasia. USDA researchers and other scientists go to the homeland of the weed to seek host specific natural enemies to be tested as candidates for introduction to the US as biocontrol agents. The agents are rigorously tested to make sure that they are safe and will not become pests of crops and native plants before they are introduced.



## Introduction to biocontrol (cont.)

Once determined to be safe, USDA scientists make sure that biocontrol agents are free from disease and parasites before they are released. Once released and established, local agencies and cooperators collect and redistribute biocontrol agents to other infested areas throughout the west.

Many agencies have adopted the International Code of Best Practices for biological control of weeds, which states that only safe, effective, and approved natural enemies will be used for biocontrol. It may take 10-20 years for a biocontrol project to successfully control a weed at a regional scale.



*Diorhabda elongata* on saltcedar  
Photo, E.M. Coombs

# Camelthorn

*Alhagi maurorum*

1. ODA
2. Richard Old, xidservices.com
3. Steve Hurst @ NRCS PLANTS
4. Ross O'Connell
5. Steve Dewey, UT State Univ.
6. USDA-NRCS PLANTS

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# Camelthorn

*Alhagi maurorum*



CA  
NV  
OR  
WA

2

## Description

Perennial; flowers June-July. Grows 1½ to 4 feet tall. Stems greenish with slender spines ¼ to 1 ¾ inches long. Leaves wedge-shaped, hairless on the upper surface, ¼ to 1¼ inches long. Flowers small, pea-like, pinkish purple, occurring on short, spine-tipped branches on upper portion of the plant. Reddish-brown jointed seed pods curve upward, deeply indented with each seed clearly outlined in the pod. Fabaceae family.

## Impacts

Camelthorn grows well on dry or moist sites and spreads rapidly along waterways. It is strongly competitive and its rapid, aggressive rhizomatous growth allows it to out-compete both native and cultivated plants; dense stands may form that are impenetrable because of its spiny stems. This plant is especially troublesome in croplands, where repeated cultivation aids its spread.

## Distribution in the US

6

PLEASE CALL 1-866-INVADER IF YOU  
FIND THIS SPECIES IN OREGON.



# Silverleaf nightshade

*Solanum elaeagnifolium*

1. Richard Old, xidservices.com
2. Kurt Schaefer
3. Richard Old, xidservices.com
4. Steve Hurst, NRCS PLANTS
5. Kurt Schaefer
6. USDA-NRCS PLANTS

Shrubs



# Silverleaf nightshade

*Solanum elaeagnifolium*



CA  
ID  
NV  
OR WA

3

## Description

Perennial; flowers from midsummer to frost. Grows 1 to 3 feet tall. Leaves narrow and, along with the stems, covered with dense hairs that give foliage a gray or silvery appearance. Flowers violet to light blue,  $\frac{3}{4}$  to 1 inch wide. Fruit a yellow or dull orange berry, which may eventually turn blackish. Solanaceae family.

## Impacts

Silverleaf nightshade is found in rangeland, pastures, waste areas and cropland in the western US. Berries and foliage are poisonous to livestock.

## Distribution in the US

**PLEASE CALL 1-866-INVADER IF YOU FIND THIS SPECIES IN OREGON.**

6



# Syrian bean-caper

*Zygophyllum fabago*

1. M. Hassler
2. Richard Old, [xidservices.com](http://xidservices.com)
3. CA Dept of Food & Ag
4. USDA-NRCS PLANTS

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# Syrian bean-caper

*Zygophyllum fabago*



CA  
ID  
OR  
WA

1

## Description

Perennial that may act like an annual in regions with harsh winters; flowers April to June. Grows up to 1½ feet tall. Leaves somewhat succulent, opposite, compound, and each having 2 oval, 1-inch leaflets. Stems smooth and thickened. Flowers borne singly or in pairs from leaf axils, salmon to yellow or white with pinkish veins and up to ¾ inch across. Zygophyllaceae family.

## Impacts

Syrian bean-caper is well suited to dry environments. Its buds and branches form on spreading roots, forming dense patches that compete for water and space. Large infestations can reduce forage potential in dryer areas of the West.

## Distribution in the US

PLEASE CALL 1-866-INVADER IF YOU FIND THIS SPECIES IN OREGON.

4

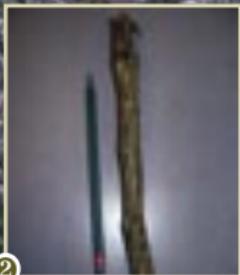


# Portuguese broom

*Cytisus striatus*

1. Glenn Miller, ODA
2. Beth Myers-Shenai, ODA
3. Steve Hurst @ NRCS PLANTS
4. Glenn Miller, ODA
5. Beth Myers-Shenai, ODA
6. Glenn Miller, ODA
7. ODA

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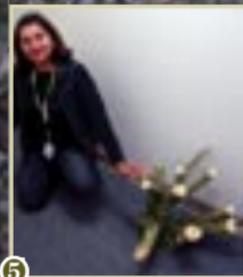
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# Portuguese broom

*Cytisus striatus*



OR

4

## Description

Perennial; blooms April to June. Grows 3 to 10 feet tall. Evergreen shrub similar to Scotch broom except pods inflated and hairy all over, giving the appearance of pussy willow buds. Stems silvery with green and white stripes. Fabaceae family.

## Impacts

Portuguese broom is similar in growth form to Scotch broom except for two major differences: it grows much larger and lives longer. Infestations in Douglas County, Oregon are highly competitive in commercial timberland, with the canopies of individual plants reaching almost 20 feet across.

## Distribution in Oregon

PLEASE CALL 1-866-INVADER IF YOU FIND THIS SPECIES IN OREGON.

7



■ Limited ■ Abundant ■ Not known to be present

2007

# Purple loosestrife

*Lythrum salicaria*

1. Bonnie Rasmussen, ODA
2. Eric Coombs, ODA
3. Linda Wilson, Univ. of ID
4. Steven J. Baskauf
5. Eric Coombs, ODA
6. ODA

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# Purple loosestrife

*Lythrum salicaria*

CA  
ID  
NV  
OR WA

2

## Description

Perennial; blooms midsummer. Grows up to 7 feet tall. Upright bushy plant. Flowers pink to purple, possessing 5 to 6 petals, and numerous on a long spike. Spreads by seed and spreading rhizomes that form dense, woody mats. Lythraceae family.

## Impacts

This former ornamental species can be found along wetlands, stream banks, and shorelines of shallow ponds. Its showy purple flowers crown a vigorous plant that crowds out marsh vegetation required by wildlife for food and shelter. Decreased waterfowl and songbird production has been well documented in heavily infested marshes.

## Biological controls

Two leaf beetles (*Galerucella californiensis* and *G. pusilla*), a root weevil and a seed weevil are all established in multiple states. *G. pusilla* is responsible for the most damage.



*G. pusilla*

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## Distribution in Oregon



■ Limited ■ Abundant ■ Not known to be present

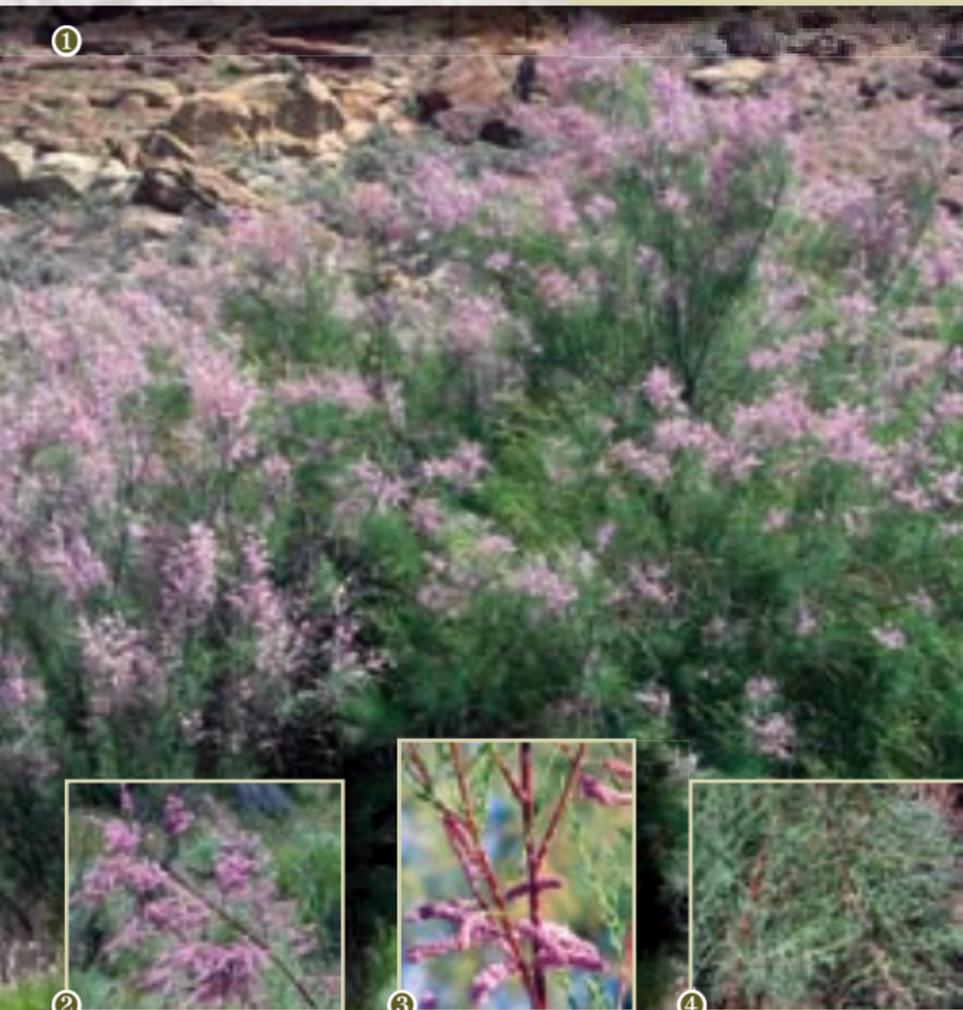
2007

# Saltcedar

*Tamarix ramosissima*

1. Dan Sharratt, ODA
2. Dan Sharratt, ODA
3. Steven Perkins @ USDA-NRCS
4. Dan Sharratt, ODA
5. Eric Coomb, ODA
6. ODA

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# Saltcedar

*Tamarix ramosissima*



OR  
NV  
WA

2

## Description

Perennial shrub; blooms April to October. Grows 5 to 20 feet tall. Bark on saplings and stems is reddish-brown. Leaves small and scale-like on highly branched, slender stems. Flowers pink to white, 5-petaled. Tamaricaceae family.

## Impacts

Saltcedar is an escaped ornamental and has become naturalized along streams, canals, and reservoirs in much of the arid West. Dense stands form adjacent to springs and waterways, robbing native plants of much needed water. Large plants can transpire at least 200 gallons of water per day and will often dry up ponds and streams.



*D. elongata*

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## Biological controls

One leaf beetle, *Diorhabda elongata*, is approved for release and is establishing in western states.

Releases have been made in Oregon and Idaho, but their status is unknown. Populations in Nevada are doing widespread damage to saltcedar.

## Distribution in Oregon

■ Limited
 ■ Abundant
 ■ Not known to be present



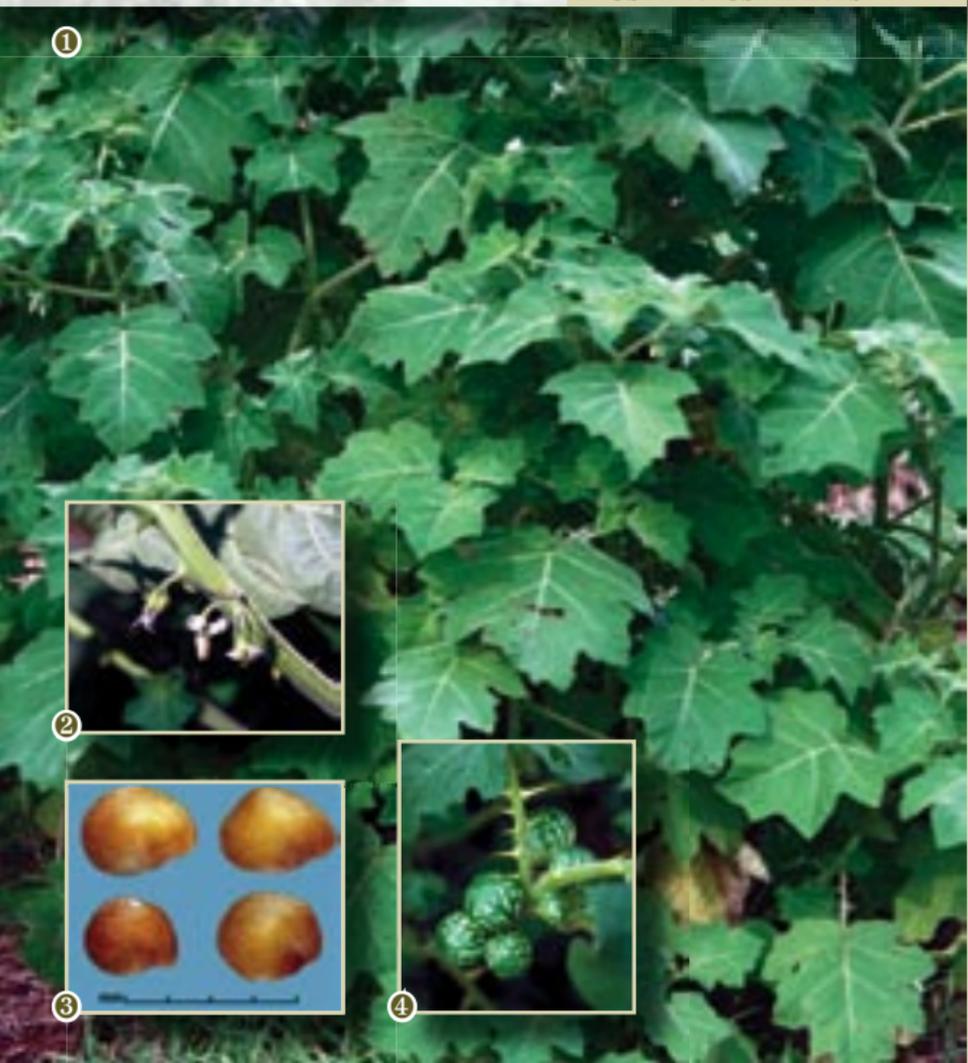
2007

# Tropical soda apple

*Solanum viarum*

1. J. Jeffrey Mullahey, Univ. of FL
2. James H. Miller, USDA Forest Service
3. USDA APHIS
4. J. Jeffrey Mullahey, Univ. of FL
5. Peggy Greb, USDA ARS
6. USDA-NRCS PLANTS

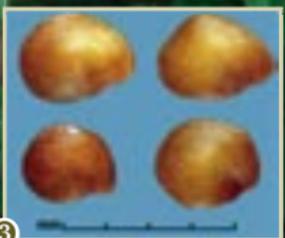
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# Tropical soda apple

*Solanum viarum*



US

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## Description

Perennial shrub; prickly and bushy. Named for fruit which are rounded, 1 inch in diameter, and mottled green maturing to yellow. Hairy, pointed-lobed leaves resembling oak leaves, 6 to 8 inches long and 2 to 6 inches wide. Leaves alternating along hairy stems. Leaf veins and stems are covered with long spines. Clusters of 1 to 5 white, 5-petaled flowers below the leaves, flowering year-round with a concentration of flowering and fruiting from September to May. Solanaceae family.

## Impacts

Tropical soda apple displaces native plants through its aggressive growth and large leaves that shade the ground. The leaves are unpalatable to livestock, diminishing the value of pastures the weed has invaded. Plants are alternate hosts to many crop pest and diseases.



*G. boliviana*

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## Biological controls

One leaf beetle, *Gratiana boliviana*, is approved for release and is established in Florida.

## Distribution in the US



# Turkeyberry

*Solanum torvum*

1. Forest & Kim Starr, USGS
2. Forest & Kim Starr, USGS
3. USDA APHIS
4. Forest & Kim Starr, USGS
5. USDA-NRCS PLANTS

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# Turkeyberry

*Solanum torvum*



US

2

## Description

Perennial shrub; erect, spiny up to 10 feet tall. Spines short and slightly curved. Bark gray and nearly smooth with raised lenticels. Inner bark has a green layer over an ivory color. Twigs are gray-green and covered with star-shaped hairs. Flowers white, 1 inch in diameter, with yellow stamens and in clusters. Leaves alternate, broadly ovate with the border entire or deeply lobed. Fruits are yellow-green berries, thin-fleshed and contain numerous flat, round, brown seeds. Solanaceae family.

## Impacts

Turkeyberry forms dense, thorny stands in pastures, forest, and waste areas. Thickets can be impenetrable because of the plant's spiny stems. It's aggressive growth allows it to out-compete both native and cultivated plants.

## Distribution in the US

5

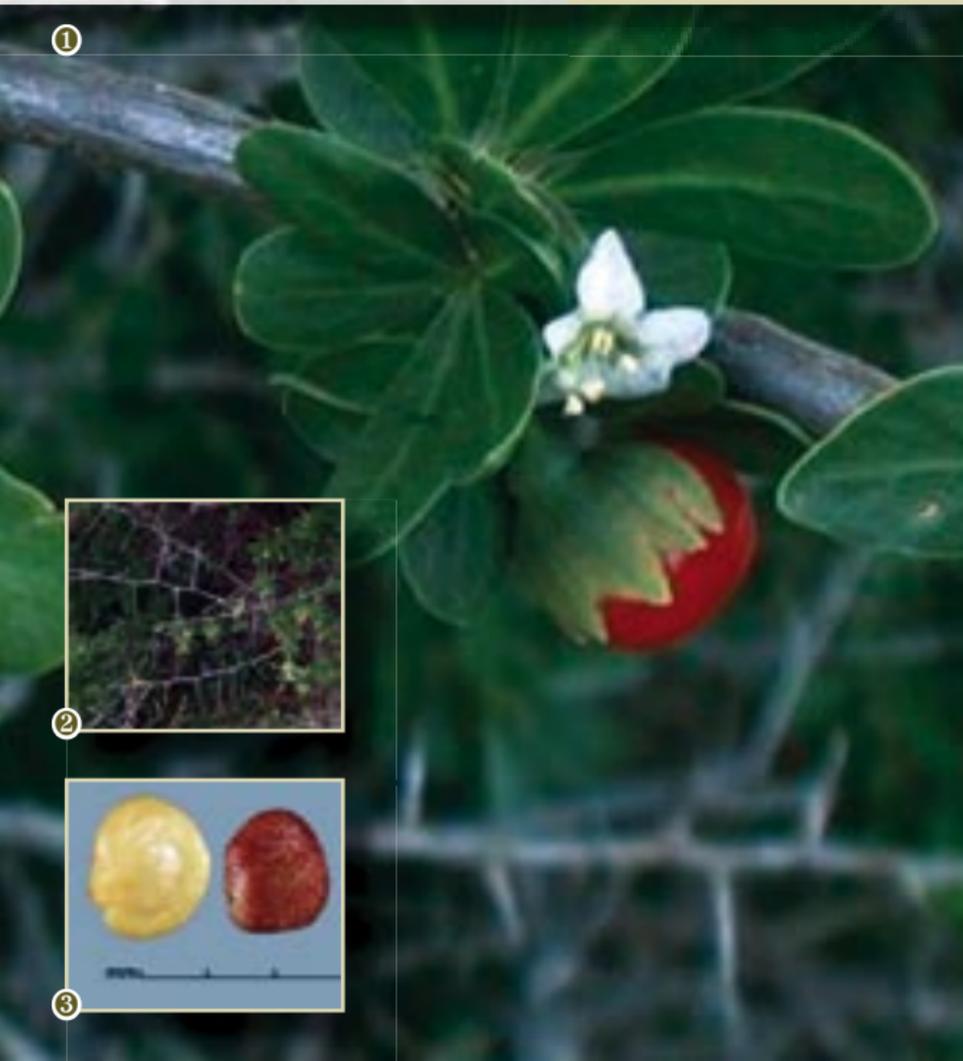


# African boxthorn

*Lycium ferocissimum*

1. Jackie Miles
2. Jackie Miles
3. USDA APHIS PPQ
4. USDA-NRCS PLANTS

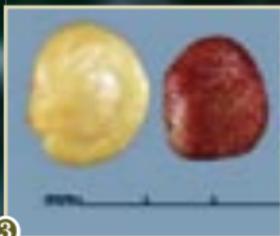
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# African boxthorn

*Lycium ferocissimum*



US

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## Description

Perennial shrub. Covered in long sharp thorns, wood very tough. Flowers white with purple markings. Leaves small, bright green, smooth, and slightly fleshy. Fruits small, plump berries ripening to red, like a small tomato. Intricately branched and may sometimes climb into trees. Root system comprised of an extensive deep, branched taproot. Solanaceae family.

## Impacts

African boxthorn's sharp spines and dense growth form prevent livestock grazing and movement. It shades and crowds out other vegetation. This plant is known to invade roadsides, waterways, and sand dunes. Its extremely dense stands can make roads impassable and the spines are strong enough to puncture vehicle tires. African boxthorn has the potential to affect recreation in beachside and other coastal areas.

## Distribution in the US

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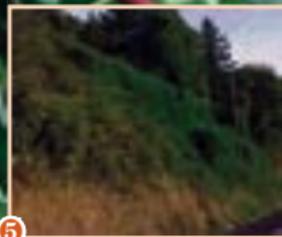


# Kudzu

*Pueraria lobata*

1. Tom Forney, ODA
2. Tom Forney, ODA
3. Steve Hurst @ NRCS PLANTS
4. Tom Forney, ODA
5. Tom Forney, ODA
6. ODA

1



# Kudzu

*Pueraria lobata*



OR  
WA

2

## Description

Perennial; flowers mid-summer. High climbing vine, very often completely covering trees forming “kudzu sculptures.” Stems up to 4 inches in diameter, brown and smooth, eventually turning finely scaly. Young stems fuzzy. Leaves compound with individual leaflets 3 to 4 inches long, oval or nearly heart shaped and may be lobed and fuzzy. Flowers pea-like, purple to red, hang in clusters, with a grape-like smell. Fabaceae family.

## Impacts

Kudzu is a highly aggressive extremely fast-growing invasive plant which is expensive to control once established. It covers all plants in its path, eliminating native species and natural diversity. Trees covered by kudzu become damaged by its weight during ice events or die from insufficient light. Vines can also bring down power lines and collapse older buildings. Estimated economic costs attributed to kudzu are \$50 million annually.

6

## Distribution in Oregon

**PLEASE CALL 1-866-INVADER IF YOU  
FIND THIS SPECIES IN OREGON.**



■ Limited 
 ■ Abundant 
 ■ Not known to be present

2007

# Heartleaf hempvine

*Mikania cordata*

1. <http://biotech.tipo.gov.tw/plantjpg/1>
2. USDA APHIS

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# Heartleaf hempvine

*Mikania cordata*

1



US

## Description

Perennial vine; grows 9 to 18 feet long. Leaves opposite, heart-shaped, and 1 to 5 inches long. Flowerheads flat-topped clusters of 4 yellowish-white flowers. Seeds small, plumed, and brownish black. Asteraceae family.

## Impacts

Heartleaf hempvine grows in moist, disturbed areas. It will grow in partial shade, but cannot tolerate dense shade. It has the potential to rapidly crowd out native vegetation if introduced to suitable habitat through wind distribution of seed or vegetative reproduction through root growth and broken stem fragments.

## Distribution in the US

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NOT KNOWN TO BE  
ESTABLISHED IN THE US  
OUTSIDE OF CULTIVATION.

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# Mile-a-minute

*Persicaria perfoliata*

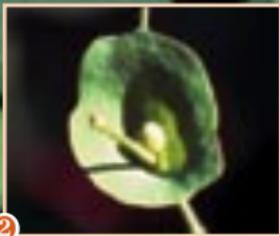
1. Britt Slattery, USFWS
2. Jil M. Swearington, USDI National Park Service
3. Leslie J. Mehrhoff, IPANE
4. USDA APHIS PPQ
5. USDA-NRCS PLANTS

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# Mile-a-minute

*Persicaria perfoliata*



NOT LISTED

3

## Description

Annual trailing vine; spines on leaves and stems. Stems slender and reddish. Leaves alternate, spaced along stem and grow cuplike leafy structures called ocreas. Flower buds emerge from ocreas. Flowers small, white, and produce metallic blue, pea-sized fruits. Seeds dark. Grows up to 6 inches a day. Polygonaceae family.

## Impacts

Mile-a-minute grows commonly on road embankments, fallow fields, young forests, streams, moist meadows and recently cut timber. It climbs over other plants by means of downward pointing spines and shades out native species. This plant can prevent tree seedlings from developing and has been detrimental to reforestation efforts.

## Biological controls

There are no agents available, but survey and testing is currently underway.

## Distribution in the US

5

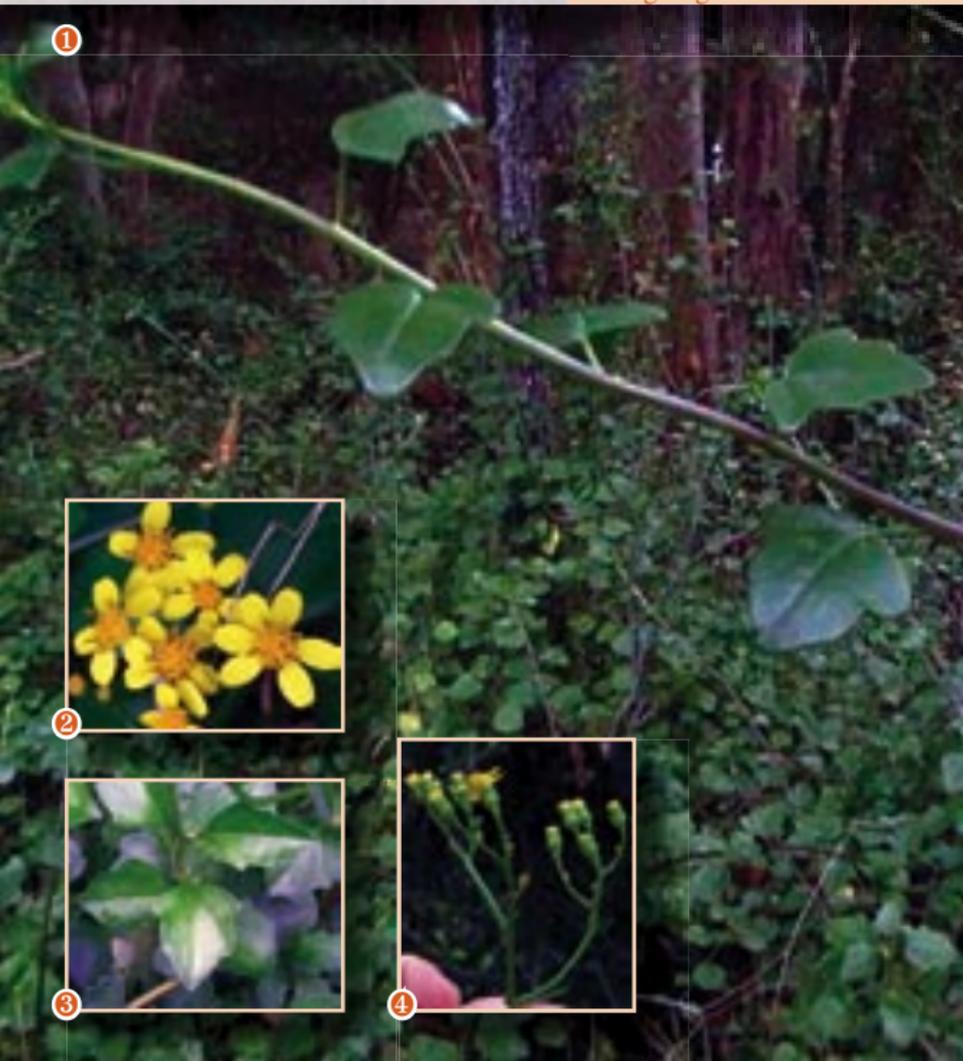


# Creeping groundsel

*Senecio angulatus*

1. J Miles
2. Luigi Riganense
3. Luigi Riganense
4. Luigi Riganense

1



2



3



4



# Creeping groundsel

*Senecio angulatus*



NOT LISTED

2

## Description

Perennial shrub/herb; form is a dense tangled shrub up to 6½ feet tall. Will climb if suitable support available. Leaves glossy, thick, fleshy, and bluntly lobed. Often confused with cape ivy but has thicker, diamond-shaped leaves. Yellow flowers are daisy-like with larger petals than cape ivy. Asteraceae family.

## Impacts

Creeping groundsel is easily dispersed by wind-blown seed, stem fragments, and dumped garden waste. This plant can smother existing native vegetation both in the ground layer and canopy. It alters the light climate in the invaded community and may suppress regeneration of native plants.

## Distribution in the US

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NOT KNOWN TO BE  
ESTABLISHED IN THE US  
OUTSIDE OF CULTIVATION.

---

# Squarrose knapweed

*Centaurea virgata*

1. USDA ARS
2. Cindy Roche
3. Steve Dewey, UT State Univ.
4. Eric Coombs, ODA
5. ODA

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# Squarrose knapweed

*Centaurea virgata*

CA  
NV  
OR

2



## Description

Perennial; grows 1½ to 3 feet tall. Multi-branched, erect, with many small, pink to rose flowers. Flowers fall readily from plant stems after flowering. Flowers more slender than most knapweeds, with recurved bract tips. Asteraceae family.

## Impacts

Squarrose knapweed is a rangeland and pasture invader, rendering these areas unsuitable for productive grazing. Dispersal is unique among knapweeds because this plant breaks off at the base and tumbles across the landscape, dispersing seeds along the way. Individual seed heads are deciduous, dislodging from the main plant and aiding dispersal by attaching to fur and clothing.



*L. minutus*

4

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## Biological controls

Many agents including two weevils (e.g. *Larinus minutus*), and two flies (e.g. *Urophora affinis*) are available where this plant is established.

## Distribution in Oregon

**PLEASE CALL 1-866-INVADER IF YOU FIND THIS SPECIES IN OREGON.**



■ Limited ■ Abundant ■ Not known to be present

2007

# Iberian and purple starthistle

(*Centaurea iberica* & *calcitrapa*)

1. Tom Forney, ODA
2. Tom Forney, ODA
3. Tom Forney, ODA
4. Photographer not known
5. CA Dept of Food & Ag
6. ODA

1



2



3



4



5

# Iberian and purple starthistle

(*Centaurea iberica*\* & *calcitrapa*)



OR  
CA  
NV  
WA

3

## Description

Annual or biennial; rosette forms in May and June, blooms midsummer through fall. Grows 1 to 6 feet tall. Plant covered in fine hairs. Leaves divided into narrow linear segments. Rosettes have spines in center. Flower heads purple with straw-colored spine-like bracts over 1 inch in length. Iberian starthistle seeds are plumed, and purple starthistle seeds are not, the distinguishing characteristic between the two plants. Asteraceae family.

## Impacts

Both species have the ability to adapt to a variety of climatic conditions. They are extremely competitive along roadsides and in low-rainfall range situations, as well as in higher rainfall pastures where they displace valuable forage species. The sharp spines deter grazing animals and wildlife, reduce the value of hay and can impede recreational use. This weedy plant has the potential to become widely established, which would significantly impact agricultural and wildland resources.

6

## Distribution in Oregon

PLEASE CALL 1-866-INVADER IF YOU  
FIND THIS SPECIES IN OREGON.

\* Not listed in WA.

■ Limited ■ Abundant ■ Not known to be present



# Woolly and smooth distaff thistle

*Carthamus lanatus* & *baeticus*

1. Ken French, ODA
2. Ken French, ODA
3. Steve Hurst @ USDA-NRCS  
PLANTS
4. Ken French, ODA
5. Ken French, ODA
6. ODA

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# Woolly and smooth distaff thistle

*Carthamus lanatus* & *baeticus*

2

CA  
OR

## Description

Winter annual; erect plant that grows to 4 feet tall. Stems rigid, ribbed, white or pale green, usually with minute hairs but some plants woolly. Leaves rigid, deeply divided, with lobes ending in short spines, prominently veined, with bases that clasp the stem. Yellow flower petals with thin, red veins distinguish distaff from other thistles. Asteraceae family.

## Impacts

*Carthamus spp.* are believed to be the most serious threat to range and pasture lands in Oregon. Dense stands can crowd out other vegetation, livestock, and recreational access. Dead plants remain standing, thorned and rigid, for at least one year after dying back and can injure the mouths and eyes of animals trying to graze around them. This plant is not palatable to domestic animals or wildlife. Once established, it is difficult to eliminate because of a persistent seedbank.

## Distribution in Oregon

6

PLEASE CALL 1-866-INVADER IF YOU  
FIND THIS SPECIES IN OREGON.



■ Limited ■ Abundant ■ Not known to be present

2007

# Plumeless thistle

*Carduus acanthoides*

1. Dan Sharratt, ODA
2. Dan Sharratt, ODA
3. Dan Sharratt, ODA
4. OH State Univ.
5. Eric Coombs, ODA
6. ODA

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# Plumeless thistle

*Carduus acanthoides*

2

CA  
OR  
WA



## Description

Winter annual or biennial; grows erect from 4 to 7 feet tall. Branches repeatedly from middle of plant upward. Basal leaves form a rosette over a stout fleshy taproot. Alternate stem leaves deeply and irregularly lobed, and bear scattered hairs. Flowers rose-purple but occasionally white or cream colored. Asteraceae family.

## Impacts

Plumeless thistle is a troublesome weed of pastures, meadows, roadsides and waste areas. It competes with desirable plants, reducing forage production. The spiny leaves and stems hinder livestock from grazing and obstruct recreational activities. Infestations diminish land value and are costly to control.



*T. horridus*

5

## Biological controls

Two weevils, *Trichosirocalus horridus* and *Rhinocyllus conicus*, are approved for release on plumeless thistle where the plant is established. *R. conicus* is only approved for movement within states (i.e., may not be moved across state lines).

6

## Distribution in Oregon

**PLEASE CALL 1-866-INVADER IF YOU FIND THIS SPECIES IN OREGON.**

■ Limited ■ Abundant ■ Not known to be present



# Orange hawkweed

*Hieracium aurantiacum*

1. Beth Myers-Shenai, ODA
2. Richard Old, xidservices.com
3. Beth Myers-Shenai, ODA
4. Beth Myers-Shenai, ODA
5. ODA

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# Orange hawkweed

*Hieracium aurantiacum*



ID  
OR  
WA

4

## Description

Perennial; flowers May to June. Grows up to 12 inches. Leaves hairy, spatula shaped and almost exclusively basal. Flower heads red to orange, 1/2 inch wide, cluster at top of stem, and number up to 30 per plant. Reproduces extensively by stolons which form dense mats of vegetation. Asteraceae family.

## Impacts

Plants of the invasive hawkweed complex produce mats of rosettes and dominate sites by out-competing other species and by releasing alleopathic compounds from their decaying leaves. They grow well in moist sunny grassy areas, but do tolerate shade in some areas. Wilderness meadows in the Pacific Northwest are at risk of invasion.

## Biological controls

Four insects—two flies, a gall midge and a gall wasp—are currently being tested for control of hawkweeds in states where they have become well-established.

8

## Distribution in Oregon

PLEASE CALL 1-866-INVADER IF YOU  
FIND THIS SPECIES IN OREGON.

■ Limited ■ Abundant ■ Not known to be present



2007

# Yellow-flowered hawkweeds

*Hieracium* spp.

1. Dan Sharratt, ODA
2. Tim Butler, ODA
3. Beth Myers-Shenai, ODA
4. ODA



# Yellow-flowered hawkweeds

*Hieracium* spp.



ID  
OR  
WA

2

## Description

Perennial; flowers June to July in lower elevations. Grows 10 to 36 inches tall. Leaves hairy, spatula shaped, and almost all basal. Flower heads clustered, yellow, ½ inch wide; up to 30 per plant. Extensive stolons form dense mats of vegetation. Invasive yellow-flowered hawkweeds species are very similar to one another and difficult to classify. Native hawkweeds have numerous stem leaves, lack stolons and generally have solitary flowers. Asteraceae family.

## Impacts

Plants of the invasive hawkweed complex produce mats of rosettes and dominate sites by out-competing other species and by releasing alleopathic compounds from their decaying leaves. They grow well in moist, sunny, grassy areas, but do tolerate shade in some areas. Wilderness meadows in the Pacific Northwest are at risk of invasion.

## Biological controls

Four insects—two flies, a gall midge, and a gall wasp—are currently being tested for control of hawkweeds in states where the plants have become well-established.

4

## Distribution in Oregon

PLEASE CALL 1-866-INVADER IF YOU FIND THIS SPECIES IN OREGON.



■ Limited ■ Abundant ■ Not known to be present

2007

# Giant hogweed

*Heracleum mantegazzianum*

1. Beth Myers-Shenai, ODA
2. Beth Myers-Shenai, ODA
3. Glenn Miller, ODA
4. USDA APHIS
5. ODA

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# Giant hogweed

*Heracleum mantegazzianum*



OR  
WA  
US

4

## Description

Perennial; flowers June to July. Grows 10 to 15 feet tall. Bolts after 2 to 4 years, then dies back. Stalks 2 to 4 inches in diameter, hollow, and have raised purple blotches with a single erect hair in the center. Flower head large, umbrella-like, up to 2½ feet in diameter. Leaves 3 to 5 feet wide, compound, and deeply incised. Closely resembles native cow parsnip, which rarely exceeds 6 feet tall with a flower head 8 to 12 inches wide. Apiaceae family.

## Impacts

**This plant is a public health hazard.** Do not expose human skin to the plant or breathe the smoke from fires. The plant exudes a clear watery sap which sensitizes the skin to sunlight. Humans often develop severe burns to the affected areas, resulting in blistering and painful swelling that can develop into blackened scars. Giant hogweed is also very invasive in nature. It readily colonizes streambanks, fields, and forest understories. It has naturalized in many of the places where it was introduced, and is one of the most invasive weeds in Europe. 5

## Distribution in Oregon



PLEASE CALL 1-866-INVADER IF YOU  
FIND THIS SPECIES IN OREGON.

■ Limited ■ Abundant ■ Not known to be present

2007

# Paterson's curse

*Echium plantagineum*

1. Tom Forney, ODA
2. Steve Hurst @ NRCS PLANTS
3. Beth Myers-Shenai, ODA
4. Beth Myers-Shenai, ODA
5. Tom Forney, ODA
6. Tim Butler, ODA
7. ODA

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# Paterson's curse

*Echium plantagineum*



OR

3

## Description

Annual or short-lived perennial; flowers spring to fall. Grows 1 to 3 feet tall. Basal and rosette leaves broad, hairy with distinct veins and wavy margins. Leaves on flowering stems smaller and more linear. Plants often multi-branched, an abundance of stout hairs arising from the base. Flower head is curled, unrolls as flowers open. Flowers 5-petaled, blue-purple, may be pink or white and 2 of 5 stamen protrude from flower. Seeds gray to black nutlets. Boraginaceae family.

## Impacts

Paterson's curse is an aggressive, drought-tolerant plant that is able to reproduce and establish under a wide range of conditions. It can be found invading dryland cereal production and pastures and is a potential significant invader of oak woodlands. This plant takes advantage of limited moisture and summer rains and is able to grow rapidly and produce seeds within a few weeks of germination. It contains pyrrolizidine alkaloids that can cause chronic liver damage to livestock that feed on it for prolonged periods of time.

7

## Distribution in Oregon

**PLEASE CALL 1-866-INVADER IF YOU FIND THIS SPECIES IN OREGON.**

■ Limited ■ Abundant ■ Not known to be present



2007

# Coltsfoot

*Tussilago farfara*

1. Leslie J. Mehrhoff, Univ. of CN
2. Steve Hurst @ NRCS PLANTS
3. C. Evans, River to River CWMA
4. OH State Univ.
5. C. Evans, River to River CWMA
6. USDA-NRCS PLANTS

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# Coltsfoot

*Tussilago farfara*



OR

①

## Description

Perennial; flowers in April or early spring. Grows 4 to 8 inches tall. Bright yellow flowers similar to dandelions appear before leaves emerge. White, fluffy seed heads. Large deep green leaves develop later, often forming a soil-covering canopy. Top leaf surface smooth, underside is covered with white hairs. Leaf stems and larger leaf veins distinctly purple in color. Spreads by underground rhizomes. Asteraceae family.

## Impacts

The most common location for coltsfoot is on roadsides. From there, it can spread by seed or rhizomes to adjacent fields. While this weed does not spread rapidly, it is of concern because there are very few herbicides that will control it adequately, and it thrives in several crops. The plant can be very competitive in nursery and vegetable crops, and tillage increases plant density. Oregon populations have been found at a few locations and have been associated with nursery production.

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## Distribution in the US

PLEASE CALL 1-866-INVADER IF YOU FIND THIS SPECIES IN OREGON.



# African rue

*Peganum harmala*

1. G.A. Cooper, Smithsonian Inst.
2. G.A. Cooper, Smithsonian Inst.
3. USDA ARS
4. Douglas Barbe, CA Dept. of Food & Ag.
5. ODA

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# African rue

*Peganum harmala*

2



CA  
NV  
OR

## Description

Perennial, much-branched herb. Leaves alternate, smooth, and divided into long, narrow segments. When crushed, stems have a bitter, acrid taste and a disagreeable odor. Flowers white with 5 petals. Fruit a many-seeded capsule. Zygophyllaceae family.

## Impacts

African rue contains at least four poisonous alkaloids that are toxic to cattle, sheep, and probably horses. The seeds and fruit of the plant are the most toxic parts, young leaves are somewhat toxic, and mature leaves are less toxic. Dry leaves are apparently nontoxic.

## Distribution in Oregon

**PLEASE CALL 1-866-INVADER IF YOU FIND THIS SPECIES IN OREGON.**

5



■ Limited ■ Abundant ■ Not known to be present

2007

# Texas blueweed

*Helianthus ciliaris*

1. CA Dept of Food & Ag
2. CA Dept of Food & Ag
3. Steve Hurst @ NRCS PLANTS
4. USDA-NRCS PLANTS

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# Texas blueweed

*Helianthus ciliaris*

2



CA  
OR  
WA

## Description

Perennial; blooms mid summer. Grows 1 to 2 feet tall. Stems arise from woody, creeping roots. Leaves mostly opposite, narrow to broadly lance-shaped, margins wavy, often with hairs. Flowerheads comprised of yellow outer (ray) flowers, and reddish to dark purple inner (disk) flowers. Asteraceae family.

## Impacts

Texas blueweed is native to the southwestern US and can be found in both cropland and disturbed areas. It is unpalatable to livestock and severely reduces crop yield in some regions. Because of its competitive nature and persistent growth, it poses the threat of becoming the dominant plant in cultivated fields it has invaded.

## Distribution in the US

PLEASE CALL 1-866-INVADER IF YOU FIND THIS SPECIES IN OREGON.

4



# Skeletonleaf bursage

*Ambrosia tomentosa*

1. USDA-NRCS PLANTS
2. Irene Lindsey
3. Steve Hurst @ NRCS PLANTS
4. Irene Lindsey
5. USDA-NRCS PLANTS

1



# Skeletonleaf bursage

*Ambrosia tomentosa*



ID  
OR

## Description

Perennial; flowers June to August. Grows 4 to 18 inches tall with extensive creeping rootstocks. Leaves lanceolate, coarsely toothed and deeply lobed. Flowers inconspicuous and yellow. Fruit a light brown bur with spines. Asteraceae family.

## Impacts

Skeletonleaf bursage grows in cultivated fields, pastures, and waste areas in several western states and survives under varied soil moisture conditions.

## Distribution in the US

PLEASE CALL 1-866-INVADER IF YOU FIND THIS SPECIES IN OREGON.

5



# Common bugloss

*Anchusa officinalis*

1. Beth Myers-Shenai, ODA
2. Beth Myers-Shenai, ODA
3. Beth Myers-Shenai, ODA
4. Steve Hurst@NRCS PLANTS
5. Beth Myers-Shenai, ODA
6. ODA



# Common bugloss

*Anchusa officinalis*



OR  
WA

3

## Description

Perennial herb; flowers May to October. Grows 1 to 2 feet tall. Stems and leaves fleshy; overall plant coarsely hairy. Basal leaves narrowly oblong; mid leaves progressively smaller up stem, and upper leaves sessile (no petiole) or clasping. Blue to purple flowers with white throats. Petals 5 equal lobes, forming an uncurved tube. Flowers found in coiled clusters at end of stems. As the flowers open, coils unfold. Fruit a 4-chambered nutlet; each nutlet contains 1 seed. Boraginaceae family.

## Impacts

Common bugloss invades alfalfa fields, pastures, pine forests, rangeland, riparian, and waste areas. The fleshy stalks can cause hay bales to mold. The plant can form large, dense stands, competing strongly with native plant communities.

## Distribution in Oregon

6

**PLEASE CALL 1-866-INVADER IF YOU FIND THIS SPECIES IN OREGON.**



■ Limited 
 ■ Abundant 
 ■ Not known to be present

2007

# Garlic mustard

*Alliaria petiolata*

1. Glenn Miller, ODA
2. Glenn Miller, ODA
3. Steve Hurst @ NRCS PLANTS
4. Glenn Miller, ODA
5. Tom Forney, ODA
6. Harriet Hinz & Ester Gerber, CABI
7. ODA

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# Garlic mustard

*Alliaria petiolata*

②

OR  
WA

## Description

Biennial; rosettes form by midsummer first year, blooms April to June second year. 1 to 3 feet tall. Basal leaves dark green, kidney shaped, and 2 to 4 inches in diameter. Stem leaves alternate, sharply toothed, triangular, get smaller toward top of stem, and produce a distinct garlic odor when crushed. Flower stalks usually single and unbranched. Flowers ¼ inch wide with 4 white petals. Brassicaceae family.

## Impacts

Garlic mustard displaces native forest understory species, reducing diversity and decreasing forage availability. Invaded habitats include forests, roadsides, streamsides, trails, and agricultural land; it thrives in the partial shade of oak savanna. Displacement occurs rapidly. This plant is very difficult to control once established.



*C. scrobicollis*

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## Biological controls

One biological control agent, *Ceutorhynchus scrobicollis*, is currently in the last phases of research; release is tentatively planned for 2008.

## Distribution in Oregon

**PLEASE CALL 1-866-INVADER IF YOU FIND THIS SPECIES IN OREGON.**

■ Limited ■ Abundant ■ Not known to be present



2007

# Japanese knotweed

*Polygonum cuspidatum*

1. Richard Old, xidservices.com
2. Chris Evans, River to River CWMA
3. Richard Old, xidservices.com
4. Glenn Miller, ODA
5. ODA

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④



# Japanese knotweed

*Polygonum cuspidatum*



CA  
OR  
WA

## Description

Perennial; blooms July to October. Grows 4 to 9 feet tall from long, creeping rhizomes. Stout stems reddish-brown, nodes slightly swollen. Leaves short-stalked, truncate, broadly ovate and 2 to 6 inches long by 2 to 4 inches wide. Flowers greenish-white to cream in large plume-like clusters at ends of stems. Hybrids with giant knotweed common. Polygonaceae family.

## Impacts

Japanese knotweed displaces native plant species, reducing biodiversity and decreasing forage availability. Invaded habitats include forests, roadsides, streamsides, trails, and agricultural land; it thrives in partial shade. Displacement occurs rapidly. This plant is very difficult to control once established. Giant and Himalayan knotweeds exhibit similar impacts.

## Biological controls

Multiple natural enemies have been identified in the plant's native range and host-specificity testing in quarantine is currently underway in Oregon. 5

## Distribution in Oregon

PLEASE CALL 1-866-INVADER IF YOU  
FIND THIS SPECIES IN OREGON.

■ Limited ■ Abundant ■ Not known to be present



2007

# Rush skeletonweed

*Chondrilla juncea*

1. Gary Piper, WA State Univ.
2. Richard Old, xidservices.com
3. Steve Hurst @ NRCS PLANTS
4. UT State Univ.
5. Steve Dewey, UT State Univ.
6. G. Markin, USFS
7. ODA

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# Rush skeletonweed

*Chondrilla juncea*

2



CA  
ID  
NV  
OR WA

## Description

Perennial; blooms July to September. Grows 1 to 4 feet tall. Yellow flower  $\frac{3}{4}$  inch in diameter with 7 to 15 petals. Coarse downbent hairs on lower 4 to 6 inches of stem; almost no leaves. Spreads primarily by seed, but roots scattered by cultivation can aid in spread. Asteraceae family.

## Impacts

Rush skeletonweed is an aggressive plant in both rangeland and cropland, particularly in light textured soil. Impacts include reduced crop yield due to competition and harvest difficulties from sticky, latex sap that the plant exudes. Extensive efforts have been made to eradicate or contain outbreaks, but new sites are being found each year in Eastern Oregon.

## Biological controls

A moth (*Bradyrrhoa gilveolella*), a gall midge (*Cystiphora schmidti*), a gall mite (*Eriophyes chondrillae*) and a rust fungus (*Puccinia chondrillina*) are all approved for release on rush skeletonweed.



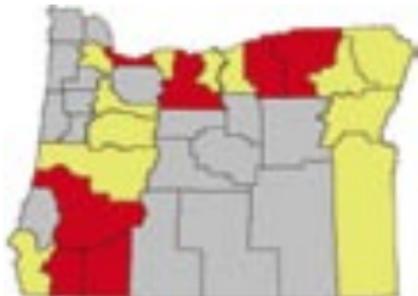
*B. gilveolella*

6

7

## Distribution in Oregon

■ Limited ■ Abundant ■ Not known to be present



2007

# Goatsrue

*Galega officinalis*

1. USDA APHIS PPQ
2. Steve Dewey, UT State Univ.
3. USDA APHIS PPQ
4. Bob Barrett, ODA
5. USDA-NRCS PLANTS

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# Goatsrue

*Galega officinalis*



NV  
WA  
US

2

## Description

Perennial herb; blooms early June to October. Grows 4 to 6 feet tall. Stems upright, multiple, and tubular. Leaves alternate with 7 to 11 leaflets. Flowers bluish to purple, pea-like, and cluster at end of stem. Blossoms produce a single seed pod with 1 to 9 bean-shaped seeds. Develops a deep taproot. Each plant produces up to 15,000 pods. Flowers and fruits essential for identification; may be confused with crown vetch. Fabaceae family.

## Impacts

Goatsrue stems and leaves contain poisonous alkaloids that are fatal to humans, sheep, and cattle if ingested. It also displaces native and beneficial plants and forms a monoculture in wetlands, limiting wildlife food and nesting sources. This plant infests areas with high soil moisture: along waterways, ditch banks, roadsides, irrigated cropland, pastures, and marshy areas. Animals will avoid goatsrue, which allows it to establish and spread in rangeland. It is difficult and expensive to control and seed may remain viable in soil for up to 10 years.

5

## Distribution in the US



# Onionweed

*Asphodelus fistulosus*

1. USDA APHIS PPQ
2. USDA APHIS PPQ
3. USDA APHIS PPQ
4. USDA APHIS PPQ
5. USDA-NRCS PLANTS

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# Onionweed

*Asphodelus fistulosus*



US

2

## Description

Perennial; erect flower stalks and leaves grow directly from stem. Leaves linear, clustered in a circular arrangement and similar to onion. White flowers with 6 drooping stamen, starting with a long thin tube that widens into a flat-faced flower with 6 separated petals, each with a central brownish mid-vein. Honey fragrance on young flowers. Buds bullet shaped. Dry round fruit splits open when seeds ripe. Rooting system a mass of thin, spreading, thread-like roots without a taproot. Liliaceae family.

## Impacts

Onionweed grows so thickly that other vegetation, particularly grass, is reduced. It reduces land value due to its impact on crop yield and costs associated with control. The presence of this weed is often a sign of overgrazed ground, since the plant is not usually eaten by animals; it is also an indication of nutrient-poor soil, as onionweed is one of the few plants that prefers it. The plant may cause dermatitis in some people.

5

## Distribution in the US



# Pom pom weed

*Campuloclinium macrocephalum*

1. WESSA
2. USDA ARS

①



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# Pom pom weed

*Campuloclinium macrocephalum*



NOT LISTED

1

## Description

Perennial herb; stems and leaves covered with rough, bristly hairs. Leaves scattered along length of stem but clustered at base to form a rosette. Rootstock short, woody, and ends in thick tuber-like perennial roots. Flowerheads showy, pink and produced in dense clusters consisting of hundreds of tiny, star shaped florets surrounded by purple bracts. Asteraceae family.

## Impacts

Pom pom weed has the ability to produce new stems from rootstock. Efficient seed dispersal combined with enormous reproductive potential enables it to rapidly encroach large areas. It infests natural grasslands, open savanna, and wetlands. This plant displaces native species and reduces biological diversity. Tuber-like food storage organs enable the plant to recover rapidly after winter or damage.

## Distribution in the US

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NOT KNOWN TO BE  
ESTABLISHED IN THE US  
OUTSIDE OF CULTIVATION.

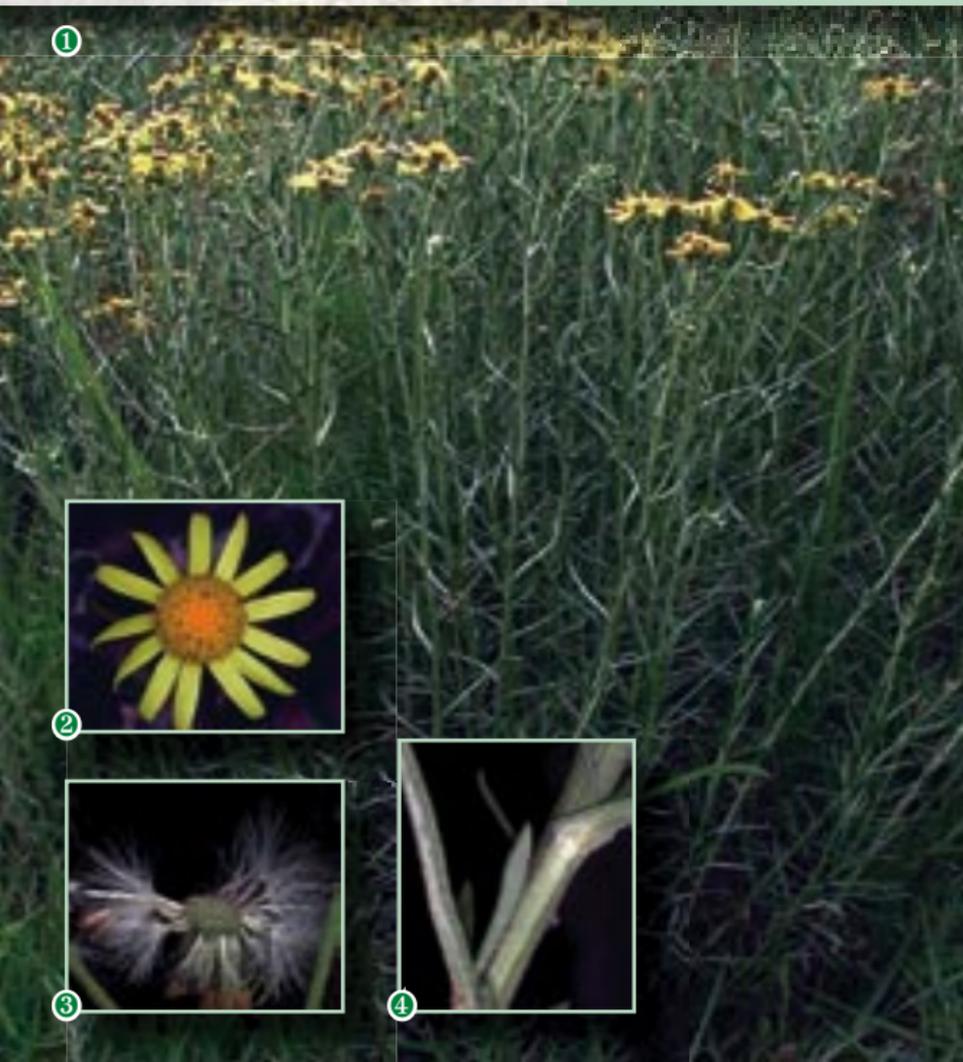
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# Narrow-leaved ragwort

*Senecio inaequidens*

1. Pedro Tenorio Lezama 2001
2. Pedro Tenorio Lezama 2001
3. Pedro Tenorio Lezama 2001
4. Pedro Tenorio Lezama 2001

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# Narrow-leaved ragwort

*Senecio inaequidens*



NOT LISTED

7

## Description

Perennial forb; erect stem often numerous branched from woody base. Leaves alternate, bright green, slightly thick and linear. Species displays a fair amount of variability in leaf shape and width. Flower-heads lemon-yellow colored. Asteraceae family.

## Impacts

Narrow-leaved ragwort is toxic to humans and livestock. It is a prolific seed producer and adapts to a wide range of environments. This plant colonizes open and disturbed areas and may also be found in natural environments such as dunes and temporary ponds.

## Distribution in the US

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NOT KNOWN TO BE  
ESTABLISHED IN THE US  
OUTSIDE OF CULTIVATION.

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# Senegal tea plant

*Gymnocoronis spilanthoides*

1. Walter Stahel, New Zealand

①



# Senegal tea plant

*Gymnocoronis spilanthoides*



NOT LISTED

1

## Description

Perennial herb; forms round bushes, extending from banks with mats of tangled stems. Stems light green, erect at first then prostrate, scrambling and branching at the nodes. Internodes hollow, inflated and buoyant. Leaves dark green and opposite. Florets white and numerous. Seed yellow-brown. Roots finely fibrous. Asteraceae family.

## Impacts

Senegal tea plant is sold in aquarium trade. It is fast growing and can rapidly cover water bodies with a floating mat, excluding other plants and animals. Infestations block drainage channels. Recreation, irrigation, and navigation activities may be severely affected. Water quality may decline if a large quantity of plants die off and decompose under water.

## Distribution in the US

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NOT KNOWN TO BE  
ESTABLISHED IN THE US  
OUTSIDE OF CULTIVATION.

---

# Stemless thistle

*Onopordum acaulon*

1. Western Australia Dept. of Ag & Food
2. J.L. Benito

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# Stemless thistle

*Onopordum acaulon*



NOT LISTED

2

## Description

Annual or biennial; leaves develop as large rosette that may spread to cover an area up to 2 feet wide. Whitish-green leaves densely covered in woolly hairs and deeply divided with numerous spiny waxy lobes. Flowerhead consists of white or purple florets and surrounded by sharp spines. Several stalkless flower heads form as a cluster at center of rosette, close to ground. Asteraceae family.

## Impacts

Dense infestations of stemless thistle reduce the carrying capacity of pastures. It is unpalatable except when wilted. This plant spreads over large areas, shading out more useful plants with its large flat leaves. Hungry stock forced to eat stemless thistle suffer from stomach ailments; liver and kidney damage can also occur.

## Distribution in the US

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NOT KNOWN TO BE  
ESTABLISHED IN THE US  
OUTSIDE OF CULTIVATION.

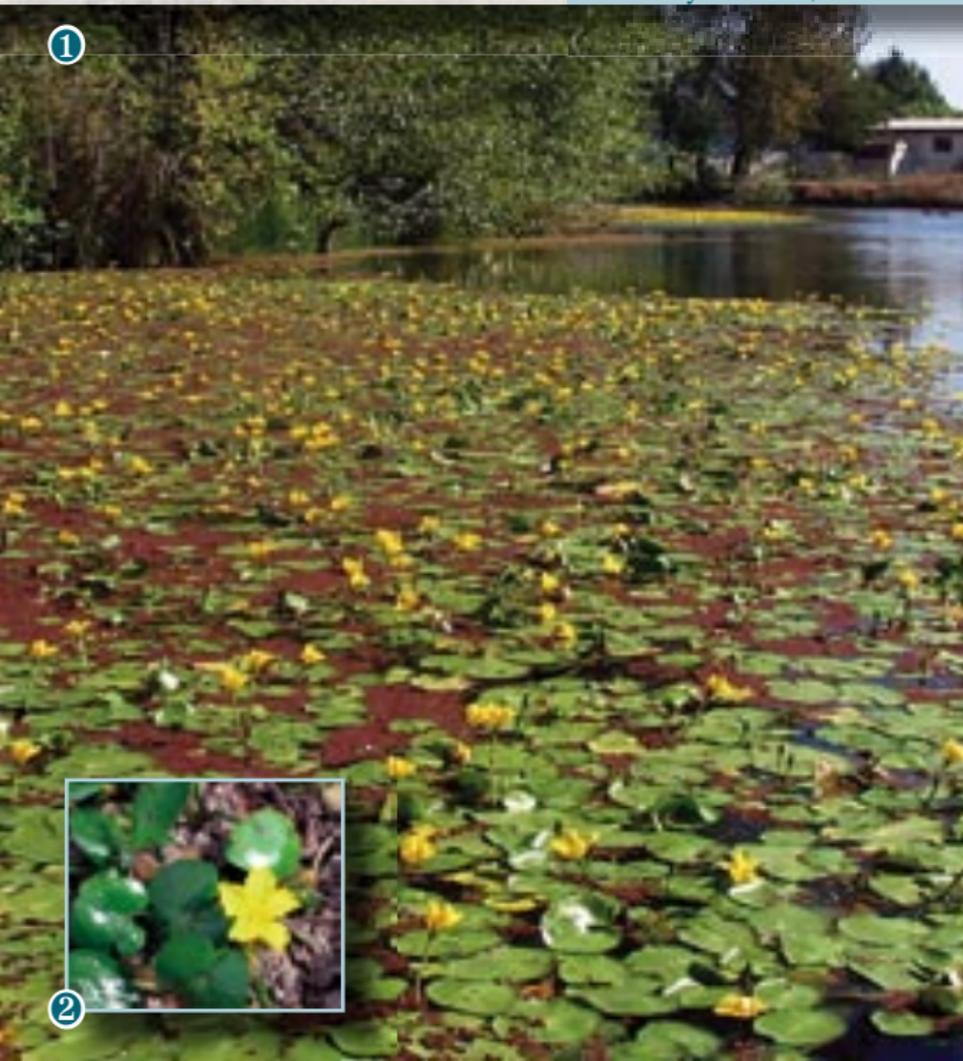
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# Yellow floating heart

*Nymphoides peltata*

1. Glenn Miller, ODA
2. Beth Myers-Shenai, ODA

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# Yellow floating heart

*Nymphoides peltata*



OR  
WA

1

## Description

Perennial; bottom-rooted with long branched stolons extending horizontally up to 3 feet or more just beneath the water surface. Floating heart-shaped to almost circular leaves on stalks that emerge from creeping rhizomes. Leaves purplish underneath, with wavy scalloped margins. Flowers bright yellow, 5-petaled on long stalks with 1 to several flowers per stalk. Menyanthaceae family.

## Impacts

Yellow floating heart grows in dense patches, excluding light for native species and creating stagnant areas with low oxygen levels underneath the floating mats. It obstruct water recreational activities. Root fragments and stolons easily separate and take root. Control of this plant is difficult economically, physically, and politically.

## Distribution in Oregon

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PLEASE CALL 1-866-INVADER IF YOU  
FIND THIS SPECIES IN OREGON.

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3

■ Limited ■ Abundant ■ Not known to be present



2007

# Hydrilla

*Hydrilla verticillata*

1. Michael Frank, Galileo Group Inc.
2. Univ. of FL IFAS CAIP
3. Allison Fox
4. Steve Hurst @ NRCS PLANTS
5. C. Evans, River to River CWMA
6. G. Buckingham, USDA-ARS
7. USDA-NRCS PLANTS

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# Hydrilla

*Hydrilla verticillata*

CA  
NV  
OR  
WA US

1

## Description

Perennial aquatic plant. Rooted to bottom with long stems that reach water's surface. Leaves  $\frac{1}{16}$  to  $\frac{1}{8}$  inch wide,  $\frac{1}{4}$  to  $\frac{3}{4}$  inch long and occur in whorls of 5. Small, axillary leaf scales found next to stem and inserted at base of the leaf, distinguishing hydrilla from other family members. The nut-like turions are a key identifying feature. Hydrocharitaceae family.

## Impacts

Hydrilla is the most serious threat to aquatic ecosystems in temperate climate zones. Dense stands of hydrilla provide poor habitat and create stagnant water (which is good breeding ground for mosquitoes). Hydrilla interferes with recreational activities and will clog irrigation ditches and intake pipes.



*H. pakistanae*

## Biological controls

Tuber and stem weevils (*Bagous affinis* and *B. hydrillae*), and two leaf-mining flies (*Hydrellia balciunasi* and *H. pakistanae*) are approved for release on hydrilla where it is established. *H. pakistanae* has had the greatest impact on US populations.

## Distribution in the US

PLEASE CALL 1-866-INVADER IF YOU  
FIND THIS SPECIES IN OREGON.



6

7

# European water chestnut

*Trapa natans*

1. Alfred Cofrancesco, US ACE
2. Leslie J. Mehrhoff, Univ. of CT
3. Leslie J. Mehrhoff, Univ. of CT
4. Steve Hurst @ NRCS PLANTS
5. Alfred Cofrancesco, US ACE
6. USDA-NRCS PLANTS

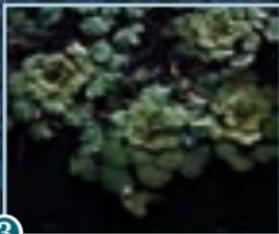
1



2



3



4



5



# European water chestnut

*Trapa natans*



OR

2

## Description

Annual aquatic plant. Upper floating leaves diamond-shaped with toothed edges, arranged on inflated, spongy stalks and occurring in clusters up to 20 inches across. Submersed leaves long and narrow or often replaced with green feather-like structures. Flowers small, solitary, and white to light purple. Fruit a large swollen nut with 2 to 4 sharp spines. Trapaceae family.

## Impacts

European water chestnut is a fierce competitor in shallow bodies of water possessing soft, muddy bottoms. In the Northeast it forms nearly impenetrable mats across wide areas of water, creating barriers to boaters, swimmers, and fisherman. Spiked nuts drift to shore where their sharp spines may hurt bare feet. Monocultures severely limit light penetration and water mixing, creating conditions of reduced oxygen levels which may increase the potential for fish kills. It is of little value to waterfowl.

## Distribution in the US

PLEASE CALL 1-866-INVADER IF YOU FIND THIS SPECIES IN OREGON.



6

# Swamp stonecrop

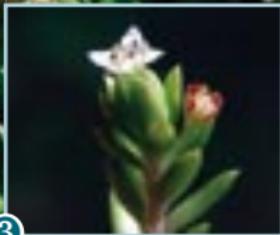
*Crassula helmsii*

1. © Graham Day, [www.habitas.org.uk/flora](http://www.habitas.org.uk/flora)
2. Univ. of FL IFAS CAIP
3. John Somerville

①



②



③

# Swamp stonecrop

*Crassula helmsii*

3



NOT LISTED

## Description

Aquatic perennial; creeping or floating round stems. Leaves succulent and opposite. Solitary flowers white or pinkish and borne in the axils of leaves. Fruit contain 2 to 5 elliptical and smooth seeds. Can grow in a variety of different aquatic habitats. Crassulaceae family.

## Impacts

Escapes of swamp stonecrop on wetlands can lead to dense mats that outcompete the native flora. It grows vigorously through most of the year, even in the winter months. This plant blocks ponds and drainage ditches and impoverishes the ecosystem for invertebrates and fish. Mats can be dangerous to pets, livestock, and children who mistake them for dry land.

## Distribution in the US

---

NOT KNOWN TO BE  
ESTABLISHED IN THE US  
OUTSIDE OF CULTIVATION.

---

# Cordgrasses

*Spartina spp.*

1. Tom Forney, ODA
2. Tom Forney, ODA
3. F. Grevstad, Univ. of WA
4. ODA
5. F. Grevstad, Univ. of WA
6. ODA

①



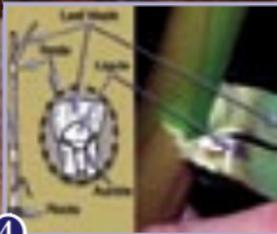
②



③



④



# Cordgrasses

*Spartina* spp.

OR  
WA

1



## Description

Perennial grass 2 to 8 feet tall. Stems round and hollow between each node. Leaf blades sharply pointed at tips and do not have a midrib. Ligule, where leaf blade joins stem, consists of a fringe of hairs. Flower spikes occur late summer to fall. Grows in intertidal estuarine habitats (not in freshwater) and develops into large circular patches. Poaceae family.

## Impacts

Cordgrasses threaten the diversity and health of estuaries in a variety of ways. By growing in dense patches, clones can reduce feeding areas for shorebirds, crabs, and other animals. Closely spaced stems trap sediment, raising the elevation of the marsh and altering hydrology in ways that could lead to flooding upstream.



*P. marginata*

5

## Biological controls

A plant hopper, *Prokelisia marginata*, is established in California and Washington, where spartina is abundant.

6

## Distribution in Oregon

PLEASE CALL 1-866-INVADER IF YOU  
FIND THIS SPECIES IN OREGON.



■ Limited ■ Abundant ■ Not known to be present

2007

# Barbed goatgrass

*Aegilops triuncialis*

1. Ken French, ODA
2. Barry A. Rice,  
The Nature Conservancy
3. Jose Hernandez, USDA-ARS
4. John M. Randall,  
The Nature Conservancy
5. ODA

①



# Barbed goatgrass

*Aegilops triuncialis*

2

CA  
OR

## Description

Annual grass; grows 8 to 16 inches tall with few to many culms. Leaf sheaths contain white hairs when young, becoming more or less smooth once matured. Blades rigid, sharp, pointed, and spreading. Grain ¼ inch long, resembling a wheat kernel. Poaceae family.

## Impacts

Goatgrasses are rangeland and dryland crop invaders. This species, aside from dominating dryland pastures in California, readily crosses with wheat, producing sterile seed and an unmarketable product. *Aegilops* spp. are closely related to wheat, making selective control of goatgrass difficult in cereal crop production.

## Distribution in Oregon

PLEASE CALL 1-866-INVADER IF YOU FIND THIS SPECIES IN OREGON.

5



■ Limited ■ Abundant ■ Not known to be present

2007

# Matgrass

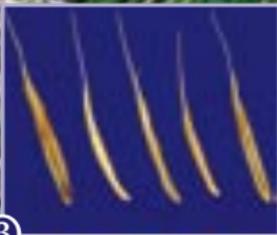
*Nardus stricta*

1. Bob Barrett, ODA
2. Tim Butler, ODA
3. Steve Hurst @ NRCS PLANTS
4. ODA

①



②



③

# Matgrass

*Nardus stricta*



ID  
OR

2

## Description

Perennial slow growing bunchgrass; flowers early to mid June in south central Oregon. Tufts up to 3 feet wide and 8 inches high. Leaves grasslike, up to ¼ inch wide, appearing narrower because blades are tightly folded along midrib. Stems tipped by inconspicuous spikes that bear all spikelets on 1 side of stem. Tufts tightly rooted and hard to remove. Poaceae family.

## Impacts

Matgrass is an uncommon non-native grass with the potential to out-compete desirable grasses in intensively grazed areas. Because it is a species of low palatability, it is not favored by grazing animals, giving matgrass a competitive edge. It is difficult to eliminate because of the difficulty locating it in mixed grass stands. Untreated plants develop seeds and perpetuate infestations for decades.

## Distribution in Oregon

**PLEASE CALL 1-866-INVADER IF YOU  
FIND THIS SPECIES IN OREGON.**

4



■ Limited ■ Abundant ■ Not known to be present

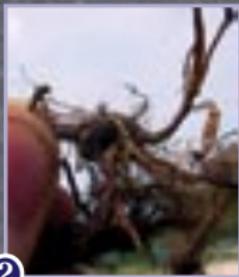
2007

# Purple nutsedge

*Cyperus rotundus*

1. Richard Old, xidservices.com
2. Richard Old, xidservices.com
3. James H. Miller,  
USDA Forest Service
4. Charles T. Bryson, USDA ARS
5. USDA-NRCS PLANTS

①



②



③



④



# Purple nutsedge

*Cyperus rotundus*

3



CA  
OR  
WA

## Description

Perennial; grows 1 to 2 feet high. Stems 3 cornered and generally longer than basal leaves. Leaves grass-like,  $\frac{1}{8}$  to  $\frac{1}{3}$  inch wide and 2 to 6 inches in length. Inflorescence consists of numerous purple spikelets. Underground tubers oblong, covered by persistent reddish scales and often formed in chains. Cyperaceae family.

## Impacts

Purple nutsedge was introduced to the US from Europe and can be found on virtually every continent. It is considered one of the world's top 10 agricultural weeds. This plant thrives in moist conditions, most notably in sandy soils found on river bottoms. It forms nut-like turions which resist herbicide treatments and tillage. In infested countries, it is commonly found in turf, ornamental areas, cultivated fields, and ditch banks.

## Distribution in the US

5

PLEASE CALL 1-866-INVADER IF YOU FIND THIS SPECIES IN OREGON.



# Serrated tussock

*Nassella trichotoma*

1. USDA APHIS PPQ
2. USDA APHIS PPQ
3. USDA APHIS PPQ
4. USDA-NRCS PLANTS

①



③



# Serrated tussock

*Nassella trichotoma*



US

1

## Description

Perennial grass. Blades numerous, thin, fine, and tightly-rolled, appearing circular in cross-section with very tiny serrations. Blades green in summer, yellow-green in winter and tips of old blades bleached. Flowering stems branched, initially erect, longer than blades and droop to the ground at maturity. Flower and seedling heads dark purple. Seed head breaks off whole each year. Has a deep fibrous root system. Poaceae family.

## Impacts

Infestations of serrated tussock result in a significant loss in livestock production, reducing value of grazing lands. Dense infestations may completely dominate pastures. This plant reduces biodiversity in native grasslands, and creates a fire hazard in urban areas. Each mature plant can produce more than 140,000 seeds per year that can be blown by wind over long distances. Serrated tussock builds large seed banks in the soil. Most seed dies within three years, although some may stay viable for decades. Control is very difficult and costly.

4

## Distribution in the US



# Contacts and information

## **Oregon Department of Agriculture**

Noxious Weed Control Program

635 Capitol St. N.E.

Salem, OR 97301

503-986-4621

<http://oregon.gov/ODA/PLANT/WEEDS>

## **US Department of Agriculture**

APHIS PPQ

6135 NE 80th Ave, Suite A-5

Portland, OR 97218

503-326-2140

<http://www.aphis.usda.gov>

## **Additional invasive plant information**

Oregon WeedMapper

<http://www.weedmapper.org>

Montana State University Center for Invasive Plant Management

<http://www.weedcenter.org>

University of Montana Invaders Database System

<http://invader.dbs.umt.edu>

Western Society of Weed Science

<http://www.wsweedscience.org>

Weed Science Society of America

<http://www.wssa.net>

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